

Effect of Liquidity Risk Management on the Financial Performance of Deposit Money Banks in Nigeria

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Abstract

The study examined the effect of Liquidity Risk on Financial Performance of Selected deposit money banks in Nigeria. The researchers sought to primarily evaluate effect of liquidity risk on financial performance of selected deposit money banks in Nigeria. The ex-post facto research design was used for this study. This work employed three (3) variables; Net operating profit margin (NOPM) for dependent variables and Non-performing loans (NPLs) and Leverage ratio (LEV) for independent variables. The period for this study was ten (10) years from 2010 – 2019. The model estimation was executed using ordinary least squares technique. The results suggest that non-performing loans have positive relationship with net operating profit margin (NOPM), while leverage ratio have negative relationship with net operating profit margin (NOPM) of selected deposit money banks. Generally, 94.24% of the variation in dependent variable were caused by change on the independent variables used for this study. The research concluded that non-performing loans have significant effect on net operating profit margin (NOPM); leverage ratio have no significant effect on net operating profit margin (NOPM). The work recommended that banks should establish the required cash in each product segment and maintain the optional level which will help in reducing the cash balance level and increase their customer deposit base through making the product accessible to more customers especially the low-income earners. At the same time, banks should consider targeting the corporate clients who will be willing to retain a large cash base in the banks for a longer duration.

Keywords: Liquidity Risk, Financial Management, Financial Performance, Deposit Money Banks

INTRODUCTION

In the present day's volatile economic atmosphere, all financial institutions are in front of hefty risks including credit risk, operational risk, liquidity risk, market risk, foreign exchange risk, and interest rate risk, along with other business risks (Khizer, Muhammad & Shama, 2011). It is not always likely to completely do away with these risks, but the possibility of loss can be minimised by adjusting some of the situations associated with loss (Thomas & Raphael, 2014). Deposit money banks (DMBs) activities include provision of services, engaging in financial intermediation, provision of loan to customers, and overall management of risk. This calls for financial systems to be analysed from a functional perspective other than institutional perspective as the functions are more stable for a long period of time than the institution (Rudra & Jayadev, 2009). Financial risk management enables financial institution to put in place safeguards to reduce the potential losses that emanate from uncertainties in the financial markets (Aleksandra, Dalia & Julija, 2014). The secret to the effectual management of risks is not to eliminate the

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intrinsic risks. For instance, credit operations of a financial institution have the intrinsic risk of potential credit losses, but by risking, financial institutions can transform a reward for the risky undertakings and earn revenues. Risks can, therefore, be a source of income to the financial institutions. Nevertheless, risk management in the Nigerian banking industry has not generated many outcomes as expected due to hindrances that include internal loans, ineffective policies and so on. It is common in Nigeria for financial institutions to prolong credit advances for directors, pals and other close relations without adhering to the set policies (Thomas & Raphael, 2014).

Banks are germane to economic development through the financial services they provide. Their intermediation role can be said to be a catalyst for economic growth. The efficient and effective performance of the banking industry over time is an index of financial stability in any nation. The extent to which a bank extends their operation to the public for productive activities accelerates the pace of a nation's economic growth and its long-term sustainability (Kolapo, Ayeni & Oke, 2012). The Nigerian banking industry has been strained by the deteriorating quality of its risk related assets as a result of the significant dip in equity market indices, global oil prices and sudden depreciation of the naira against global currencies. The most important aspect of banking sector in respect of the financial allocation in the world due to its intermediation functions of transferring funds from surplus units to deficit units (Ongore, 2013; Mohammad, Nur, Suhal&Zuhura, 2014). Growe (2009) states that risk is a natural element of business and community life in a condition that raises the chance of losses, gains and the uncertain potential events which could manipulate the success of financial institutions. As a result, well establish risk management practices (RMPs) can assist banks to reduce their exposure to risk. The development of international financial markets and rising variety of financial instruments has increased the possibility of banks' achievement to financial resources at an extensive level. Under such conditions, the financial market are rapidly developed and some opportunities are provided to design new products and present more services. Although, it seems that the speed of such changes is different from one country to another, but the banks generally compete with each other to develop and expand the new financial instruments and services (Naser, Mohammad & Ma' Someh; 2013).

Liquidity is considered as critical success factor of a bank. Therefore, ineffectiveness in its management constitutes a huge problem to a bank. The initial bank failures recorded in 2010 were principally due to inefficiencies in the management of the liquidity of such bank which in one way or the other had something to do with either liquidity inadequacy or the relative inefficiency in their management. The marginal loans in the banking system call to mind the important factor that government at all time preoccupy themselves with banks. This shows the degree of importance attached to liquidity and its management by these governments and deviation from its ratio in inadequacy of its management always spells trouble for the bank concerned. The far-reaching consequences of inadequacy and liquidity risk can also be examined apart from profit declines. Many deposit money banks in Nigeria had been either merged or completely shut down. Some Nigerian deposit money banks workers had also been forcefully thrown into unemployment market, example, Access Bank Plc, Eco bank and Union Bank of Nigeria Plc reduced their staff strength in 2015 and 2020. Some of these deposit money banks have not paid dividend to their shareholders for many years now due to decrease in their profit generation. It is in the light of the above crisis and more that it becomes necessary to investigate the effect of liquidity risk on financial performance of selected deposit money banks in Nigeria. This research is intended to fill the gap of inadequate information and understanding that exists in relation to Liquidity risk and financial performance of deposit money banks in Nigeria. The major hypothesis underling this study is stated thus:

Ho₁: Non-performing loans (NPLs) has no significant effect on Net operating profit margin (NOPM) of selected deposit money banks in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Concept of Risk Management

Risk can be defined as the future impact of hazardous actions that has not been eliminated in an organization. It can also be seen as future uncertainties more often as a result of uncontrolled hazards. If the risks involve skill sets by management, the same situation may result to a different kind of risk. Further to this, risk has been defined as the mix of the probability of an occasion and its results (Naimy, 2011). The loss can be considered in several ways such as direct financial loss to the business, or can be a misfortune regarding to the business and loss of assets to the business or life. Risk management consists of a series of well elaborated steps whose main objectives are to identify the risks, address, and eliminate risk items before they become either lethal to successful business organization or a major source of expensive rework of an organization processes. Studies have shown that risk management in banking industry is a cornerstone to fair and acceptable banking practice. In such manner all banks in the present-day unstable and flimsy money related environment are confronting various risks to be specific: credit hazard, liquidity risks, remote trade risks, showcase risks and financing cost risks and so on. These mentioned risks among others may in one way or the other lead to closure of deposit money banks as a result of inability to meet its financial obligations (Carey, 2001).

In light to this, risk management is very common and even more important in monetary environments than in any other sectors of the economy. The undoubted motivation behind money related organizations is to expand income in terms of profits and offer the value addition to shareholders investments by offering different financial services, and particularly by overseeing risks adequately. A dramatic loss coupled with mismanagement of deposit money banks has taken place in the banking industry in the last decade. Several Commercial banks that had been doing admirably well all of a sudden stunned by huge misfortunes which led to closure of the operation because of imbalanced credit exposures and failure to mitigate risks in general. In this way, the study has exposed the gap between risk identification, measurement and management practices in the deposit money banks and its influence in financial performance (Ismi, 2004).

Concept of Liquidity Risk

Liquidity is generally defined as the ability of a financial firm to meet its debt obligations without incurring unacceptably large losses. Thus, liquidity risk is the risk that a firm will not be able to meet its current and future cash flow and collateral needs, both expected and unexpected, without materially affecting its daily operations or overall financial condition. Tian (2009) states that there are two types of liquidity: market liquidity and funding liquidity. Market liquidity is the ability of a market participant to execute a trade or liquidate, a position with little or no cost, risk or inconvenience. Funding liquidity is the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. The researcher adds that market liquidity risk is the loss incurred when a market participant wants to execute a trade or to liquidate a position immediately while not hitting the best price while funding liquidity risk is the risk that a bank is not able to meet the cash flow and collateral need obligations. Nwaezeaku (2008) defines liquidity as the degree of convertibility to cash or the ease with which any asset can be converted to cash (sold at a fair market price). Liquidity management therefore involves the strategic supply or withdrawal from the market or circulation the amount of liquidity consistent with a desired level of short-term reserve money without distorting the profit-making ability and operations of the bank. It relies on the daily assessment of the liquidity conditions in the banking system, so as to determine its liquidity needs and thus the volume of liquidity to allot or withdraw from the market. The liquidity needs of the banking system are usually defined by the sum of reserve requirements imposed on banks by a monetary authority (CBN, 2012).

Acharya and Naqvi (2012) see liquidity as the speed and certainty with which an asset can be converted back into cash whenever the asset holder desires. A liquid bank stores enough liquid assets and cash together with the ability to raise funds quickly from other sources to enable it meet its payment obligations and financial commitment in a timely manner. Ngwu (2006) views liquidity management as the act of storing enough funds and raising funds quickly from the market to satisfy depositors, loan customers and other parties with a view to maintaining public confidence. Bank liquidity means the ability to meet financial obligations as they come due. Liquidity in commercial bank means the bank's ability to finance all its contractual obligations when due, and these obligations can include lending, investment and withdrawal of deposits and maturity of liabilities, which happen in the normal course of the bank actions (Ali, 2015). Erika and Raimonda (2014) state that liquidity in simplified terms is companies' ability to cover its obligations towards creditors calling funds at inconvenient time, expressed in measured number. In other words, if the liquidity is not managed in proper way, firm can face situation of illiquidity and will technically be bankrupt or face losses. No manager wants to lead a company to this situation. This is the main reason why companies have to be aware of liquidity risk management. Managers have to be ready to adapt to unfavorable economic conditions and possible changes in order to stay in the market and not to damage company's image and relationships with stakeholders.

Risk Management and Bank Performance

Increasing shareholders' return epitomising bank performance is one major objective of bank management. The objective often comes at the cost of increasing risk. Bank faces various risks such as interest risk, market risk, credit risk, off balance risk, technology and operational risk, foreign exchange risk, country risk, liquidity risk, and insolvency risk (Tandelilin, Kaaro, Mahadwartha, &Supriyatna, 2007). The bank's motivation for risk management comes from those risks which can lead to bank underperformance. Issues of risk management in banking sector have greater impact not only on the bank but also on the economic growth (Tandelilin, Kaaro, Mahadwartha & Supriyatna 2007).

Tai (2004) concludes that some empirical evidence indicates that the past return shocks emanating from banking sector have significant impact not only on the volatilities of foreign exchange and aggregate stock markets, but also on their prices, suggesting that bank can be a major source of contagion during the crisis. Banks which better implement the risk management may have some advantages: (i) It is in line with obedience function toward the rule; (ii) It increases their reputation and opportunity to attract more wide customers in building their portfolio of fund resources; (iii) It increases their efficiency and profitability. Cebenoyan& Strahan (2004) find evidence that banks which have advanced in risk management have greater credit availability, rather than reduced risk in the banking system. The greater credit availability leads to the opportunity to increase the productive assets and bank's profit.

Empirical Review

Enekwe, Eziedo&Agu (2017) examined the effect of Liquidity Risk on Financial Performance of Selected Quoted Commercial Banks in Nigeria. The researchers sought to primarily evaluate effect of liquidity risk on financial performance of selected deposit money banks in Nigeria. The ex-post facto research design was used for this study. This work employed six (6) variables; Net operating profit margin (NOPM) for dependent variables and Deposits, Cash, Liquidity-Gap, Non-performing loans (NPLs) and Leverage ratio (LEV) for independent variables. The period for this study was six (6) years from 2009 – 2014. The model estimation was executed using ordinary least squares technique. Descriptive statistics, Spearman rank- order correlation and regression analysis were applied for the analyses. The results suggest that deposits, cash and non-performing loans have positive relationship with net operating profit margin (NOPM), while liquidity-gap and leverage ratio have negative relationship with net operating profit margin (NOPM) of selected deposit money banks. Generally, 94.24% of the variations in dependent variable were caused by change on the independent variables used for this study. It further revealed that deposits, cash and non-performing loans have significant effect on net operating profit margin (NOPM); while liquidity-gap and leverage ratio have no significant effect on net operating profit margin (NOPM).

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The work recommends that banks should establish the required cash in each product segment and maintain the optimal level which will help in reducing the cash balance level and increase their customer deposit base through making the product accessible to more customers especially the low-income earners. At the same time, banks should consider targeting the corporate clients who will be willing to retain a large cash base in the banks for a longer duration.

Nwangi (2014) investigated on the effect of liquidity risk management on financial performance of commercial banks in Kenya. The results of the study show that a unit increase in liquid assets to total assets ratio decreases return on assets by 1%. A unit increase in liquid assets to total deposits ratio decreases return on assets by 2.2%. A unit increase in borrowings from banks decreases return on assets by 14.2%. Finally, the control variable which was asset quality shows that a unit increase in non-performing loans as a proportion of total loans would lead to a 12.4% decrease in return on assets. The study concludes that liquidity risk management has a significant negative relationship with financial performance of commercial banks. Borrowings from banks by commercial banks to meet shorter liquidity needs do have the greatest impact on liquidity at 14.2% and were significant at 5%. The study recommended that Management should establish the required cash in each product segment and maintain the optimal level which will help in reducing the cash balance level. At the same time, banks should consider targeting the corporate clients who will be willing to return a large cash base in the banks for a longer duration. Ejoh, Okpa and Egba (2014) investigated the impact of credit and liquidity risk management on the profitability of deposit money banks in Nigeria. The researchers found that there is a significant relationship between bank liquidity and profitability. The researchers added that for effective and efficient performance of banks, there is a need for strategic credit risk and liquidity risk policy formulation and implementation in full. Credit and liquidity risk management are one of the key factors for bank survival. The result also investigated their relationship in Nigeria money deposit bank using First Bank of Nigeria Plc as a case study. It was revealed that each category of risk has a significant impact on bank profitability. It was also documented that the interaction of both risk categories significantly determines banks' probability of default.

Ibe (2013) studied the impact of liquidity management on the profitability of banks in Nigeria. The results of this study have shown that liquidity management is indeed a crucial problem in the Nigerian banking industry. The variables selected have not performed well in terms of their contribution towards the performance of the selected banks as represented by profit after tax. Mentioned is the fact that the management of cash and short-term fund in the three selected banks contributed negatively in Afribank and United Bank for Africa and minimally in Diamond Bank. The rest of the independent variables did not contribute much to the performance of the banks. Cash and short-term fund have not been properly managed in UBA which means that the amount held may have been in excess of the requirement for greater performance since cash is sterile. The results also have shown that banks should hold more treasury bills and certificates (TBC) as their impact on bank performance has been consistently commendable in the three selected banks. The study recommended that stakeholders should increase their customers deposit base through making the product accessible to more customers especially the low-income earners who have been neglected for a long time by the mainstream banks. Oluwafemi & Obawale, (2010) examined effect of Risk Management on Financial Performance of commercial Banks in Nigeria. Data for the study was derived from annual observations of ten Nigeria banks between the period of 2006-2009. Profitability of the institutions was in by ratios of ROA and ROE. The independent variables in the study were liquidity, credit and capital risks. The study inferred that there is a critical relationship between bank performance and risks administration. The study also concluded that better risk management in such as management of funds, reducing unnecessary costs such as doubtful advances and obligation value proportion examination brings about higher financial performance. In this way, the analyst held the view that it is of high significance that commercial banks have sufficient risk administration practices. The study recommended that Management should apply more of a quick snapshot of a firm's risk, rather than a figure that can be worked over for a long period of time.

Theoretical Review

The theories discussed are Modern Portfolio theory and Moral Hazard Theory for the purpose of this research.

Modern Portfolio Theory (MPT)

The hypothesis of Modern Portfolio Theory (MPT) is a speculation set forth by Harry Markowitz in his paper. The hypothesis was distributed in 1952 by the Journal of Finance. The venture hypothesis depended on the possibility that risks disinclined financial specialists in the business can build portfolios to expand expected stock returns based on the level of market risks in a speculation, understanding that risks is an inborn and huge piece of higher reward in venture. The hypothesis came to be among the most critical and noteworthy financial speculations in the realm of fund and venture. The hypothesis is additionally alluded to as portfolio hypothesis and proposes that it is workable for financial specialists to build a proficient bleeding edge of ideal portfolios, which offers the most extreme and conceivable expected returns for a particular given level of risk. It encourages and recommends that, for speculators it is not sufficiently just to center at the normal risks and stock return of one particular stock. By putting resources into numerous stocks, a financial specialist can win in case of broadening, by diminishing the risks in the portfolio given. This hypothesis consequently tries to measure the advantages of enhancement.

For most investors, the risk part is that any return from an investment might be lower than the expected returns or put in other words, the variations from the expected stock returns. According to the theory, each stock has its own deviation from the stock mean. This standard deviation from the mean is called risk, (Markowitz, 1952); cited in the work of Charles Matuku (2016). The hypothesis likewise clarifies on capital assets pricing model (CAPM). As per CAPM, every single sane financial specialist ought to put the market portfolio, utilized or deleveraged with positions in the risk-free resource. Notwithstanding this, CAPM likewise thought of beta which relates an advantage's normal return. Portfolio hypothesis in this way gives a plain setting for comprehension the connections results of orderly risks and rewards. It has extensively formed how monetary institutional portfolios are overseen and persuaded the utilization of dishonorable and aloof speculation methods in the commercial banks. The comprehension of portfolio hypothesis and CAPM is utilized as a part of money related risks administration systems. In connection to this hypothesis, Commercial banks have a commitment to investigate all venture exercises by figuring the normal returns.

Moral Hazard Theory

This theory has been widely used in Economics world. The theory argues that one party takes more risks because other parties elsewhere bear the costs for those risks. This may occur where the actions of someone may change to the detriment of another party participating in an active role in economic or financial transactions (Krugman, 2009). The theory explains that, moral hazard occurs under a situation of information asymmetry where party taking the risk in a financial transaction knows more about the transactions, its intentions than the other party paying for the problems as a result of the risk incurred in the transaction Economist Krugman (2009) described moral hazard as a situation where one party comes up with decisions about how and when to take the risks because another party will bear the costs in the risks. The theory can be seen/perceived in a standard case where an agency setting in a bank or Insurance companies. The company has less information about the principal and the insured person can serve as the agent. In the Automobile insurance companies, the theory applies to for drivers; the theory creates an additional incentive for risky and careless driving since other parties will cater a part of the costs of the agent's careless driving and the accidents caused. In addition a similar case is in the presence of unemployment insurance cover, an unemployed people have an additional incentive reluctantly look for employment because other parties will cater for his expenses. This study will be underpinning on this theory.

Methodology

The ex-post facto research design was used because it involves events that have already taken place in the past and cannot be manipulated. These are data obtained from published sources and used for a purpose that could be different from that of the agency that initially collected and published the data. In this case, the data were obtained from official documents of selected deposit money banks in Nigeria, relevant journals, annual reports or financial statement (statement of comprehensive income and statement of financial position), existing research materials on liquidity risk from learned scholars and available textbooks on the research topic. Also, the researcher gathered data from selected deposit money banks annual report or financial statement and used them to analyze Non-performing loans (NPLs), Leverage ratio (LEV) and Net Operating Profit Margin (NOPM) for a period of six (10) years from 2010 – 2019. This is because it deals in answering our research question and to empirically test our research hypotheses.

The population of the study composed of all deposit money banks in Nigeria between the years 2010 – 2019. First bank and Guarantee Trust bank (GTB) Plc were randomly selected using the convenient sampling technique from the 14 quoted deposit money banks in Nigeria. The choice of ordinary least squares (OLS) and descriptive statistics for the research work is divided by the fact that its computational procedures is simple and the estimates obtained from this procedure have optional properties which include linearity, unbiasedness, mini-variance and mean square error estimation. In carrying out this research work on effect of liquidity risk on financial performance the researcher developed a compact form of our model as follow:

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_nx_n \dots e_i \dots \dots \dots (i)$$

Where:

- Y = Dependent Variable of banks
- x = Independent Variable of banks
- b₀ = Intercept for x variable of banks
- b₁–b₃ = Coefficient for the independent variables x of banks, denoting the nature of relationship or effect with dependent variable y (or parameters).
- e_i = Error term
- n = Coefficient for each of the independent variables

The regression model is adapted from the one used by Arif and Anees (2012) when they did a similar research on Nigeria banks. This work models that:

Performance = f (Non- Performance loans and leverage ratio)

The model specifically took the form;

$$NOPM = B_0 + B_1 (NPL) + B_2 (LEV) + e_i \dots \dots \dots (ii)$$

Where:

- NOPM = Net operating profit margin (NOPM) is Net operating income divided by revenue.
- NPLs = Non-performing loans: The provisioning for NPLs is taken from profit and loss statement of banks for the analysis in this study.

Leverage Ratio (LEV) = This was obtained short-term debt + long-term debt)/fixed Assets.

The F-test was used to determine the significance of the regression while the coefficient of determination, R² was used to determine how much variation in y is explained by x. Ordinary Least Square Regression analysis was applied to investigate the relationship of independent variables with dependent variable and to know the effect of liquidity risk on financial performance. By using this method, the researchers were able to identify the significance of each explanatory variable to the model and also the significance of the overall model.

RESULT AND DISCUSSION

Table 1: Descriptive Statistics

| | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>Mean</i> | <i>Standard Deviation</i> |
|-------------|-----------|----------------|----------------|-------------|---------------------------|
| <i>NPLs</i> | 10 | 344.0000 | 93151712 | 16397472 | 24900999 |
| <i>NOPM</i> | 10 | 0.033100 | 1.251300 | 0.387737 | 0.326777 |
| <i>LEV</i> | 10 | 0.325000 | 31.33940 | 5.514420 | 5.626218 |

Sources: Researchers Computation (2020)

The descriptive statistics table 1 shows that standard deviation column indicates that the values were widely dispersed from the mean values. This means that as mean value increases, the value of standard deviation will also increase and vice versa. Also, the low standard deviation of Net Operating Profit Margin (NOPM) implies that it does not deviate so much from the mean while the standard deviation of non-performing loans and leverage ratio were 5.234257 and 16.04187. The implication of the result was that the observed distributions of Non-Performing Loans and Leverage ratio were normally distributed. Model specification involves the non-performing loans and determination of dependent and leverage ratio substitution are relatively high implying much deviation from their respective means which is also reflected in the squared deviation figures.

Table 2: Regression Analysis

Dependent Variable NOPM
 Method: Panel Least Squares
 Date: 06/25/20 Time: 11:52
 Sample: 2010 2019
 Included observations: 10

Source: E-view 10.0 (2020)

Discussion of Findings

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---------------------------------------|-------------|-----------------------|-------------|-----------|
| C | 0.016853 | 0.098201 | 0.171620 | 0.8660 |
| NPLs | 4.14E-09 | 2.02E-09 | 2.054229 | 0.0578 |
| LEV | -0.001574 | 0.004446 | -0.354014 | 0.7283 |
| Cross-section fixed (dummy variables) | | | | |
| Period fixed (dummy variables) | | | | |
| R-squared | 0.942408 | Mean dependent var | | 0.387737 |
| Adjusted R-squared | 0.888656 | S.D. dependent var | | 0.326777 |
| S.E. of regression | 0.109040 | Akaike info criterion | | -1.287356 |
| Sum squared resid | 0.178345 | Schwarz criterion | | -0.586758 |
| Log likelihood | 34.31034 | Hannan-Quinn criter. | | 1.063229 |
| F-statistic | 17.53242 | Durbin-Watson stat | | 2.324185 |
| Prob(F-statistic) | 0.000001 | | | |

The regression analysis Table 2 shows that R-Squared is 94.24% of the variation in Net Operating Profit Margin (NOPM) of selected deposit money banks in Nigeria were caused by the level of Non-Performing Loans (NPLs) and Leverage ratio (LEV) while 5.76% of the variations in Net Operating Profit Margin (NOPM) were affected by other factors outside our model. The adjusted R-Squared which indicates a figure more than 50% implies that; Non-Performing Loans (NPLs) and Leverage ratio (LEV)

were the major determining factors of Net Operating Profit Margin (NOPM) of selected deposit money banks in Nigeria. The Durbin-watson statistic is 2.324185 while F-Statistic is 17.53242 at P-value of 0.000001.

The regression analysis further indicates that t-calculated of Non-Performing loans (NPLs) used for this study have significant effect on Net Operating Profit Margin (NOPM) while the remaining the independent variables (leverage ratio) have no significant effect on Net Operating Profit Margin (NOPM) of selected deposit money banks in Nigeria. Arif and Ahmed (2012), Maaka (2013) and Mwangi (2014) agree with our findings that deposits; cash and non-performing loans have significant effect on

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profitability of their study while Ari and Ahmed (2012) and Maaka (2013) were inconsonance with liquidity-gap and Leverage ratio which indicates no significant effect on profitability. So, the test output described to the results and the emerging multiple regression equation is as: $(NOPM)_{yt} = 0.016853 + 4.14E-09(NPLs)_{yt} - 0.001574(LEV)_{yt} + e_i$. This confirms that the higher the ability of banks to withstand liquidity risk in the short term and the risk from the presence of large non-liquid assets, the higher the performance of banks. At the end, the researcher concludes that deposit money banks in Nigeria can raise the level of performance by improving their ability to face risk from liquidity shocks, risk from high demand for short-term liquidity and the risk from the presence of the large non-liquid assets.

Conclusion and Recommendations

Based on the results of the analyses for this study, the researcher therefore concluded that; Non-performing Loans (NPLs) have significant effect on net operating profit margin of selected deposit money banks in Nigeria and Leverage ratio (LEV) has no significant effect on net operating profit margin (NOPM) of selected deposit money banks in Nigeria. It is time to work with non-performing loan as the funds that are given to the borrowers as loans must be safe and are recovered and when due. Banks do business with depositor's money, if banks can't get depositors fund when they want, there might be a vulnerable situation in the industry. Public may lose confidence from the bank, which may create run on the bank. As a result, performance of the bank can be negatively affected. Effective risk management is accepted as a major cornerstone of bank management by academics, practitioners and regulators and acknowledging this reality and the need for a comprehensive approach to deal with bank risk management, the Basel committee on Banking Supervision adopted by the Basel I Accords, followed by the Basel II Accords and recently by the Basel III, to deal with the matter (Zaphaniah, 2013). Moreover, risk management is found to be one of the determinants of returns of banks' stocks. In line with the findings, the researcher recommended as follows:

- i. The work recommends that banks should establish the required cash in each product segment and maintain the optional level which will help in reducing the cash balance level and increase their customer deposit base through making the product accessible to more customers especially the low-income earners. At the same time, banks should consider targeting the corporate clients who will be willing to retain a large cash base in the banks for a longer duration.
- ii. Bank managers should apply more of a quick snapshot of a firm's risk, rather than a figure that can be worked over for a long period of time.
- iii. The banks board of directors should check and monitor all the non-performing loans in order to reduce the occurrence of doubtful debt or unpaid debt at the appropriate time.

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